

Appl. No. 10/672,128
Amdt. Dated September 28, 2005
Reply to Office Action of March 28, 2005

NC 34668

Amendment to the Claims

Listing of Claims:

- 1 Claim 1 (currently amended): A system that facilitates signal
2 transmission and reception, comprising:
3 a balanced duplexer comprising;
4 a first component having at least two filters to convey signals
5 within a transmission and reception frequency band; and
6 a second component that interfaces the first component to a
7 front-end and a back-end, the second component providing isolation
8 between the first component and the front and back ends.
9
- 1 Claim 2 (original): The system of claim 1, the first component provides
2 concurrent signal transmission and reception.
3
- 1 Claim 3 (currently amended): The system of claim 1, the first-second
2 component comprising two or more filters-couplers.
3
- 1 Claim 4 (canceled)
2
- 1 Claim 5 (currently amended): The system of claim 4 3, the second
2 component comprising two 3db hybrid couplers.
3
- 1 Claim 6 (original): The system of claim 5, the 3db hybrid couplers
2 comprising at least one of a Lange coupler and a discrete coupler.

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1 **Claim 7 (cancelled)**

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1 **Claim 8 (original): The system of claim 1 employed within at least one of**
2 **a mobile phone, a web phone, a personal data assistant (PDA), a hand-**
3 **held PC, a pocket PC, a palm-pilot, a laptop, a tablet PC, a Notepad, a**
4 **GPS, a pager, a personal computer, a mainframe, and a workstation.**

5

1 **Claim 9 (currently amended): A balanced duplexer, comprising:**
2 **a first filter;**

3 **a second filter, the first and second filters have a substantially**
4 **similar input and output impedance;**

5 **a first coupler that interfaces the first and second filters to a**
6 **processing unit of a device and the first coupler interfaces a first**
7 **termination; and**

8 **a second coupler that interfaces the first and second filters to an**
9 **antenna, a detector and the second coupler interfaces a second**
10 **termination, the balanced duplexer is employed to facilitate transmitting**
11 **and receiving signals, each signal having a respective signal power,**
12 **through the first and second filters.**

13

1 **Claim 10 (currently amended): The system balanced duplexer of claim**
2 **9, the first and second filters are employed such that a portion of the**
3 **signal power is directed through one of the filters and the remaining**
4 **signal power is directed through the other filter.**

5

1 **Claim 11 (currently amended): The system balanced duplexer of claim**
2 **10, the portion of signal power directed to respective filters is**
3 **determined by a power ratio.**

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1 **Claim 12 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **10, the portion of signal power directed through respective filters is**
3 **about one half the total power.**

4

1 **Claim 13 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **10, the first and second filters configured such that if one filter becomes**
3 **inoperable, the other filter can be utilized to process the full signal**
4 **power.**

5

1 **Claim 14 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **9, the balanced duplexer buffers an input and an output stage.**

3

1 **Claim 15 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **9, the first and second couplers being 3 dB hybrid couplers comprising**
3 **one of a Lange coupler and a discrete coupler.**

4

1 **Claim 16 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **15, the Lange coupler providing isolation between the first and second**
3 **filters and the processing unit and the first and second filters and the**
4 **antenna and detector.**

5

1 **Claim 17 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **9, the first and second terminations is about 50 Ω .**

3

1 **Claim 18 (currently amended): The ~~system~~ balanced duplexer of claim**
2 **9, the first and second filters comprising acoustic filters comprising**
3 **SAW and BAW filters.**

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1 **Claim 19 (currently amended): The system balanced duplexer of claim 9**
2 **employed within at least one of a mobile phone, a web phone, a personal**
3 **data assistant (PDA), a hand-held PC, a pocket PC, a palm-pilot, a**
4 **laptop, a tablet PC, a Notepad, a GPS, a pager, a personal computer, a**
5 **mainframe, and a workstation.**

6
1 **Claim 20 (currently amended): The system balanced duplexer of claim**
2 **9, the first and second couplers divert reflected power into the first and**
3 **second terminations, respectively.**

4
1 **Claim 21 (currently amended): The system balanced duplexer of claim**
2 **9, the first and second couplers reduce reflected energy by combining**
3 **reflected energy that is 180 degrees out of phase.**

4
1 **Claim 22 (currently amended): The system balanced duplexer of claim**
2 **9, the first and second filters employed in the reception of a signal to**
3 **improve LNA and antenna matching.**

4
1 **Claim 23 (currently amended): A ~~methodology~~ method for transmitting**
2 **signals, comprising:**

3 **conveying a generated signal to a balanced duplexer, the signal**
4 **divided into two portions, a first portion with a first signal power**
5 **transmitted through a first filter of the balanced duplexer and a**
6 **remaining portion transmitted through a second filter, the remaining**
7 **portion associated with a remaining signal power;**

8 **combining the first portion and second signal portions after**
9 **having exited at least one coupler, the combined first portion and**
10 **second portion forming a final signal, and**

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12 transmitting the final signal.

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1 Claim 24 (currently amended): The method of claim 23, further
2 comprising employing 3 dB hybrid couplers to divide ~~and combine~~ the
3 generated signal, and the 3dB hybrid couplers and obtain the final
4 signal.

5

1 Claim 25 (original): The method of claim 24, further comprising
2 providing isolation between the 3 dB hybrid couplers and a signal
3 generating and a transmitting component.

4

1 Claim 26 (currently amended): A ~~methodology~~ method for receiving
2 signals, comprising:

3 accepting a signal;

4 conveying the signal to a balanced duplexer, the signal conveyed
5 through at least one filter of the balanced duplexer, and

6 isolating the signal from a transmitted signal.

7

1 Claim 27 (original): A system that facilitates concurrent signal
2 transmission and reception via a balanced duplexer, comprising:

3 means for coupling a generated signal with the balanced
4 duplexer;

5 means for coupling a received signal with the balanced duplexer;

6 means for isolating the generated signal from the received signal;

7 means for filtering the generated and received signals, and

8 means for diverting power reflections associated with the
9 generated and received signals to terminations.

10

1 Claim 28 (new): The method of claim 26 wherein the balanced duplexer
2 comprises two filters.

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- 1 **Claim 29 (new): The system of claim 27 wherein the balanced duplexer**
- 2 **comprises two filters.**